

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-16. (Cancelled)

17 (Currently Amended). A method of ~~welding thermoplastic molded articles, in particular of contour-~~ welding three-dimensional thermoplastic molded articles, comprising the following features:

- moving a laser-absorptive join partnerspartner ~~(1,2)~~ and a laser transmissive join partner into contact in the vicinity of an outline (K) that is to be co-weldedwelded;
- acting on the join partners ~~(1,2)~~ in the an area of joining by a clamping device ~~(10,10')~~;
- exposing ~~one (2) of the~~ laser-absorptive join partnerspartner ~~(1,2)~~ to radiation in the a welding area by a laser welding beam ~~(3)~~ and transmitting the laser to the laser transmissive join partner; and
- additionally and simultaneously exposing the ~~other laser absorptive join partner (1)~~ in the welding area to an electromagnetic secondary radiation ~~(15)~~ for selective temperature increase thereof such that the temperature field in the welding area is homogenized, wherein the secondary

radiation comprises at least beam fractions that deviate from
the wavelength of the laser welding beam.

Claim 18. (Cancelled)

19 (Currently Amended). A method according to claim 17, wherein the secondary radiation ~~(15)~~ used is IR or UV radiation.

20 (Currently Amended). A method according to claim 19, wherein the IR radiation used is one of a medium-wave and short-wave IR secondary radiation ~~(15)~~.

21 (Cancelled).

22 (Currently Amended). A method according to claim 17, wherein the secondary radiation ~~(15)~~ is being led ahead or behind of the laser welding beam ~~(3)~~.

23 (Currently Amended). A method according to claim 17, wherein the secondary radiation ~~(15)~~ is being focused.

24 (Currently Amended). A method according to claim 17, wherein at least one of the secondary radiation ~~(15)~~ and the laser welding beam ~~(3)~~ is being applied by a clamping device ~~(10')~~ that is transmissive thereto.

25 (Withdrawn). An apparatus for welding thermoplastic molded articles, in particular for contour-welding three-dimensional molded articles, comprising

- a clamping device (10,10') for two join partners (1,2);
- a laser welding beam source for producing a laser welding beam (3);
- a laser welding bema guide (5,35) for guidance of the laser welding beam (3) to one (2) of the two join partners (1,2) in a welding area (18) between the two join partners (1,2);
- a secondary radiation source (14) for producing an electromagnetic secondary radiation (15); and
- a secondary radiation guide (16) for guidance of the secondary radiation (15) to the other (1) of the two join partners (1,2) in the welding area (18) such that, by selective temperature increase of the other join partner (1), the temperature field in the welding area (18) is homogenized.

26 (Withdrawn). An apparatus according to claim 25, wherein the secondary radiation (15) comprises at least beam fractions that deviate from the wave-length of the laser welding beam (3).

27 (Withdrawn). An apparatus according to claim 25, wherein the secondary radiation source (14) is one of an IR and UV radiator.

28 (Withdrawn). An apparatus according to claim 27, wherein the secondary radiation source (14) is one of a medium-wave IR radiator and a short-wave IR halogen radiator.

29 (Withdrawn). An apparatus according to claim 25, wherein a focus of the laser welding beam (3) is disposed substantially concentrically and synchronously of an area (19) the secondary radiation (15) acts on.

30 (Withdrawn). An apparatus according to claim 29, wherein the area (19) the secondary radiation (15) acts on leads ahead of the focus (21) of the laser welding beam (3).

31 (Withdrawn). An apparatus according to claim 25, comprising a focus device (16) for the secondary radiation (15).

32 (Withdrawn). An apparatus according to claim 25, comprising a clamping device that is transmissive to at least one of the laser welding beam (3) and the secondary radiation (15).

33 (Withdrawn). An apparatus according to claim 32, comprising a clamping roller (10') through which passes at

Appln. No. 10/540,850
Amd. dated February 11, 2008
Reply to Office Action of October 10, 2007

least one of the laser welding beam (3) and the secondary radiation (15) towards the welding area.